

REMARKS / ARGUMENTS

Applicants note that an error appears in the Office Action Summary. The prior communication from Applicants was submitted to the USPTO under a certificate of mailing dated December 6, 2006 and received by the USPTO on December 11, 2006. Applicants are not aware of any communication dated January 5, 2007.

Applicants believe that the finality of the rejections of claims in this case is premature and was not necessitated by Applicants' amendment filed on December 6, 2006. Rather, it was the arguments set forth in the amendment against the cited prior art that necessitated the withdrawal of the prior rejections. When such arguments are presented in responses that clearly show the deficiencies of the prior art, it is not uncommon for an Examiner to make a second search of the prior art in an attempt to uncover more relevant references. However, the inadequacies of the initially produced prior art was not the fault of Applicants and prosecution should not be prematurely foreclosed by blaming the new rejections on Applicants' amendment.

Applicants' amendment to claims 7 and 10 was made for the purposes of clarifying the operational aspects of the invention as supported by the specification and did not include additional structure to the elements. Both the plunger element and the electromagnetic coil element were recited in the original claims and their structures were not changed by the amendment. These elements are among the very same elements that were missing from the Fujimura et al patent when it was cited along with Yokota et al to support a rejection in the first office action. While the Examiner's interpretation of Fujimura et al was argued in the amendment as wrong, Applicants, nevertheless, made clarifying entries to the claims. Although the operations of the elements were clarified by the added language, there were no new elements added. Furthermore, the added description should have been expected when the initial search was made since the elements had been so described in the specification¹.

¹ See original claims 7 and 11.

Applicants maintain that the only reason the Examiner chose to make a second search of the prior art was because of Applicants' arguments showing the insufficiencies in the cited prior art to support the initial rejections, rather than the amendment. Both Fujimura et al and Yokota et al failed to support the rejection, with or without the amendment. For these reasons, the Examiner is respectfully requested to withdraw the finality of the rejection as stated in the Office Action.

Claims 7 - 11 stand rejected under 35 USC § 103 as being unpatentable over Fujimura et al in view of Duffy.

Claims 7 – 9 are directed to a power steering pump that includes a housing that defines a bore having an axis, an outlet adjacent one end of the bore, a fluid discharge port communicating with the bore at a first axial location and a fluid bypass port communicating with the bore at a second axial location. The pump also includes pumping elements disposed within the housing for pumping fluid to the fluid discharge port and communicating with the bypass port for drawing fluid therefrom. A flow control valve is slideably received in the bore and defines an inlet to the bypass port. A plunger is operatively connected to the flow control valve and is responsive to an applied electromagnetic field to slide the flow control valve to various positions between a fully closed position wherein the flow control valve closes the inlet and a fully open position wherein maximum fluid flows from the bore to the fluid bypass port through the inlet. A spring is operatively coupled to the flow control valve for biasing the flow control valve in the open position and an electromagnetic coil is included for applying an electromagnetic field to the plunger to vary the position of the plunger and thereby vary the size of the inlet and to proportionally control fluid flow to the fluid bypass port.

Claims 10 and 11 are directed to a power steering pump that includes a housing defining a bore having an axis and open end as well as a fluid discharge port communicating with the bore at a first axial location proximate to the open end, and a fluid bypass port communicating with the bore at a second axial location. The pump also includes pumping elements disposed within the housing and adapted for drawing

fluid from the fluid bypass port and pumping fluid to the fluid discharge port. A sleeve is received in the bore which has an opening communicating with the fluid bypass port. A flow control valve is slideably received in the bore and has an opening. The flow control valve is slideable to various positions between a fully closed position that closes the opening in the sleeve and a fully open position. The opening in the flow control valve cooperates with the opening in the sleeve to define an inlet to proportionally control fluid flow to the fluid bypass port. In addition, a tubular extension is sealing mounted onto the housing at the open end and a plunger is disposed within the tubular extension and operatively connected to the flow control valve. The plunger is responsive to an applied electromagnetic field to slide the valve axially to various open positions between the fully closed position and the fully open position and to vary the position of the flow control valve and thereby vary the size of the inlet. A spring engaging the plunger is included for biasing the flow control valve in the open position and an electromagnetic coil is disposed about the extension. The coil is adapted for applying an electromagnetic field to the plunger and causing it to be responsively positioned.

It was heartening to see that the Examiner recognizes the precedence of *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992) to guide his decisions in this matter. However, it is clear that the Examiner did not apply the principles and criteria stated in those cases in formulating his conclusion.

Neither Fujimura, et al nor Duffy suggest a steering pump with all the elements in the combination as set forth in claims 7-11. Additionally, there is no suggestion in either patent to make the combination alleged by the Examiner. Also, the Examiner has not expressed any particular knowledge by one skilled in this art that would cause such individual to make the alleged combination. Therefore, the rejection of the claims on the grounds of obviousness is not properly evidenced and should be withdrawn.

Rather than suggest that the device should be modified to be electrically controlled, Fujimura et al teaches away from such a concept. Fujimura et al discloses a hydraulic

pressure reactive flow valve that responds to feedback pressure from the discharge port to regulate the amount of operating fluid that flows back to a reservoir (col 5, lines 1-3). The concept employed uses the principle of preventing by-pass flow when the system is at rest and only opening up the by-pass flow path in response to pump fluid pressure. There is no mention or suggestion in Fujimura et al that one should add any electrical control to the valve shown in its many embodiments or how such modification should be applied.

While it is noted that the Examiner again stated: "Fujimura et al does not disclose an electrical means for sliding the flow control valve.", Applicants also wish to point out that Fujimura et al further fails to disclose other claimed elements. For instance, a plunger element that is operatively connected to the flow valve and responsive to an applied electric field to slide the flow control valve to various positions between fully closed and fully open positions. Also, Fujimura et al fails to disclose a spring that is operatively coupled to the flow control valve for biasing the flow control valve in the open position.

As mentioned above, Fujimura et al teaches that the valved pathway between the input port to the bypass port is closed by the position of the spool valve 16 when in its normally biased position. The spring 15 functions to bias the valve to keep this pathway normally closed. It is only after sufficient pressure is achieved in the pressure reducing chamber 23 that the spool element 16 is moved to the right (Fig. 3) and causes the pathway between input port to the bypass port to become open. This is completely opposite to what Applicants are claiming.

Duffy, teaches an electronically controlled throttling valve for use in conjunction with a power steering system. In reaction to various sensor outputs in the system, the CPU applies pulse width modulation signals to an electromagnetic coil to axially adjust the valve to predetermined positions and correspondingly adjust the degree of restriction between the input and output passages of the valve.

The Examiner has made a conclusion that *"...it would have been obvious to one of ordinary skill in the art to modify Fujimura et al by replacing the hydraulic actuation with an electrical means as taught by Duffy to regulate flow to the fluid bypass port as a means of electronically controlling the valve is [sp] response to vehicle specific values such as speed."* Contrary to the Examiner's conclusion, and as required by the MPEP and case law, the basis for combining references to support a rejection on obviousness must come from the references themselves or that knowledge generally available to one of ordinary skill in the art to modify the reference or to combine the relevant teachings. The mere fact that the two references are in the same field does not provide the necessary knowledge, suggestion or obvious push to make the combination. Moreover, the knowledge that one skilled in the art must have to make the combination has not been alleged or in any way presented. Short of Applicants recitation in the claims, there is no other basis on which one can allege the combination at the time of Applicants' invention and have it survive an appeal. Therefore, the references as combined by the examiner are insufficient to support a rejection under 35 USC (103)(a) and the rejection should be withdrawn.

The examiner has provisionally rejected claims 1 - 11 on the non-statutory grounds of obviousness-type double patenting over claims 2, 4, 5, 7, 8 and 10-14 of co-pending application 10/631,363. Applicants have filed a Terminal Disclaimer to overcome this rejection.

The other prior art cited by the examiner have been reviewed and it is agreed that it was properly not cited to support rejections of any pending claims

It is believed that the foregoing remarks and arguments set forth the basis on which the Examiner's rejections stated in the aforementioned Office Action are in error and should be withdrawn. Accordingly, the examiner is requested to withdraw his rejections and pass the case to issue.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul K. Godwin, Jr.", written over a horizontal line.

Paul K. Godwin, Jr.
Registration No. 27725
Attorney/Agent for Applicant(s)

Date: 4/3/2007
% MacMillan, Sobanski & Todd, LLC
Phone: 734-542-0900
Fax: 734 542-9569